**Section 724.198 Detection Monitoring Program**

An owner or operator required to establish a detection monitoring program under this Subpart F must, at a minimum, discharge the following responsibilities:

a) The owner or operator must monitor for indicator parameters (e.g., specific conductance, total organic carbon, or total organic halogen), waste constituents or reaction products that provide a reliable indication of the presence of hazardous constituents in groundwater. The Agency must specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:

1) The types, quantities, and concentrations of constituents in wastes managed at the regulated unit;

2) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area;

3) The detectability of indicator parameters, waste constituents, and reaction products in groundwater; and

4) The concentrations or values and coefficients of variation of proposed monitoring parameters or constituents in the groundwater background.

b) The owner or operator must install a groundwater monitoring system at the compliance point as specified under Section 724.195. The groundwater monitoring system must comply with Sections 724.197(a)(2), 724.197(b), and 724.197(c).

c) The owner or operator must conduct a groundwater monitoring program for each chemical parameter and hazardous constituent specified in the permit pursuant to subsection (a) in accordance with Section 724.197(g). The owner or operator must maintain a record of groundwater analytical data, as measured and in a form necessary for the determination of statistical significance under Section 724.197(h).

d) The Agency must specify the frequencies for collecting samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent specified in the permit conditions under subsection (a) in accordance with Section 724.197(g).

e) The owner or operator must determine the groundwater flow rate and direction in the uppermost aquifer at least annually.

f) The owner or operator must determine whether there is statistically significant evidence of contamination for any chemical parameter or hazardous constituent specified in the permit pursuant to subsection (a) at a frequency specified under subsection (d).

1) In determining whether statistically significant evidence of contamination exists, the owner or operator must use the methods specified in the permit under Section 724.197(h). These methods must compare data collected at the compliance points to the background groundwater quality data.

2) The owner or operator must determine whether there is statistically significant evidence of contamination at each monitoring well at the compliance point within a reasonable period of time after completion of sampling. The Agency must specify in the facility permit what period of time is reasonable, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of groundwater samples.

g) If the owner or operator determines pursuant to subsection (f) that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents specified pursuant to subsection (a) at any monitoring well at the compliance point, the owner or operator must do the following:

1) Notify the Agency of this finding in writing within seven days. The notification must indicate what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination.

2) Immediately sample the groundwater in all monitoring wells and determine whether constituents in the list of Appendix I are present, and if so, in what concentration. However, the Agency must allow sampling for a site-specific subset of constituents from the Appendix I list and for other representative or related waste constituents if it determines that sampling for that site-specific subset of contaminants and other constituents is more economical and equally effective for determining whether groundwater contamination has occurred.

3) For any compounds in Appendix I found in the analysis pursuant to subsection (g)(2), the owner or operator may resample within one month or at an alternative site-specific schedule approved by the Agency and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring. If the owner or operator does not resample for the compounds set forth in subsection (g)(2), the hazardous constituents found during this initial Appendix I analysis will form the basis for compliance monitoring.

4) Within 90 days, submit to the Agency an application for a permit modification to establish a compliance monitoring program meeting the requirements of Section 724.199. The application must include the following information:

A) An identification of the concentration of any constituent in Appendix I detected in the groundwater at each monitoring well at the compliance point;

B) Any proposed changes to the groundwater monitoring system at the facility necessary to meet the requirements of Section 724.199;

C) Any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of Section 724.199;

D) For each hazardous constituent detected at the compliance point, a proposed concentration limit under Section 724.194(a)(1) or (a)(2), or a notice of intent to seek an alternate concentration limit under Section 724.194(b).

5) Within 180 days, submit the following to the Agency:

A) All data necessary to justify an alternate concentration limit sought under Section 724.194(b); and

B) An engineering feasibility plan for a corrective action program necessary to meet the requirement of Section 724.200, unless the following is true:

i) All hazardous constituents identified under subsection (g)(2) are listed in Table 1 of Section 724.194 and their concentrations do not exceed the respective values given in that table; or

ii) The owner or operator has sought an alternate concentration limit under Section 724.194(b) for every hazardous constituent identified under subsection (g)(2).

6) If the owner or operator determines, pursuant to subsection (f), that there is a statistically significant difference for chemical parameters or hazardous constituents specified pursuant to subsection (a) at any monitoring well at the compliance point, the owner or operator may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis or statistical evaluation, or natural variation in the groundwater. The owner or operator may make a demonstration under this subsection (g) in addition to, or in lieu of, submitting a permit modification application under subsection (g)(4); however, the owner or operator is not relieved of the requirement to submit a permit modification application within the time specified in subsection (g)(4) unless the demonstration made under this subsection (g) successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this subsection (g), the owner or operator must do the following:

A) Notify the Agency in writing, within seven days of determining statistically significant evidence of contamination at the compliance point, that the owner or operator intends to make a demonstration under this subsection (g);

B) Within 90 days, submit a report to the Agency that demonstrates that a source other than a regulated unit caused the contamination or that the contamination resulted from error in sampling, analysis, or evaluation;

C) Within 90 days, submit to the Agency an application for a permit modification to make any appropriate changes to the detection monitoring program facility; and

D) Continue to monitor in accordance with the detection monitoring program established under this Section.

h) If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of this Section, the owner or operator must, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

(Source: Amended at 42 Ill. Reg. 22614, effective November 19, 2018)